

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A viscoelastic characteristic value-measuring apparatus comprising:

an input bar and an output bar arranged in a straight line to hold a specimen made of a viscoelastic material therebetween;

first and second strain gauges installed on said input bar to measure an incident strain wave generated when a front end of said input bar is hit and a reflected strain wave; and

third and fourth strain gauges installed on said output bar to measure a transmitted strain wave transmitted from said input bar to said output bar through said specimen,

wherein said input bar and said output bar are made of a viscoelastic material; and

a length of said input bar is set so that the reflected strain wave is damped and a re-reflected strain wave is not generated.

9. ((Twice Amended) A method of measuring a viscoelastic characteristic value, comprising the steps of:

providing a measuring apparatus having an input bar and output bar;

setting a length of said input bar such that a reflected strain wave generated in the input bar when the input bar is hit is damped and a re-reflected strain wave is not generated;

hitting a front end of said input bar, with a specimen held between a rear end of said input bar and a front end of an output bar to generate a strain wave including an incident strain wave, the reflected strain wave, and a transmitted strain wave propagating in said input bar, said specimen, and said output bar;

measuring said incident strain wave and said reflected strain wave with first and second strain gauges installed on said input bar, and measuring a transmitted strain wave with third and fourth strain gauges installed on said output bar;

estimating a history of said incident strain wave at the rear end of said input bar, a history of said reflected strain wave at the rear end of said input bar, and a history of said transmitted strain wave at the front end of said output bar by using a history of said each strain wave;

computing a strain speed history of a specimen, a strain history thereof, and a stress history thereof from said estimated history of said incident strain wave, said history of said reflected strain wave, and said history of said transmitted strain wave and determining a stress-strain curve of said specimen; and

computing a viscoelastic characteristic value including Young's modulus or a loss factor, from said stress-strain curve.

Please add the following new claims:

C³ --16. The measuring apparatus according to claim 1, further comprising:
an impact bar for hitting the front end of the input bar.

17. The measuring apparatus according to claim 16, wherein the specimen includes a viscoelastic material having a viscoelastic characteristic that a maximum strain speed generated at the specimen is 500-8000 per second, when the front end of the input bar is hit with the impact bar at an impact speed of 1m/s – 70m/s.

18. The measuring apparatus of claim 1, wherein the apparatus measures the strain generated at the specimen when it deforms in a relatively large amount and at a relatively high speed.

19. The method according to claim 9, wherein the maximum strain speed generated at the specimen is 500-8000 per second, when the front end of the input bar is hit with a impact bar.

20. The method of claim 9, wherein the viscoelastic characteristic value for the specimen is computed when the specimen deforms in a relatively large amount at a relative high speed.

21. The measuring apparatus according to claim 1, wherein
the specimen has a characteristic maximum strain deformation amount
in the range from 1% to 30%.

22. The method according to claim 9, wherein
the specimen has a characteristic maximum strain deformation amount in the
range from 1% to 30%.--
